



SOTERA[®]

PROUDLY MANUFACTURED BY TUTHILL

SOTERA TECHNICAL DATA SHEET

FOR ALL 400B SERIES MODELS

The Sotera 400 Series is a multi-use transfer pump designed for the low-pressure displacement of a variety of chemical and industrial fluids found within the industries of agriculture, automotive, construction, manufacturing, mechanical power transmission, and more.

PRODUCT PARTS	PRODUCT MATERIALS
Pump Housing	Virgin Polypropylene, Glass-Fiber Reinforced
Operation	Reciprocating Spring-Driven, Dual-Diaphragm Design
Power Transmission	Oil-Bath Gear Reducer
Performance	Motor load is proportional to flow rate: lower flow, lower motor current draw, regardless of fluid viscosity
Wetted	Polypropylene Body and Valves, Stainless Steel Fasteners, Hastelloy Check Valve Springs, Hytrel, Buna-N, EPDM, Fluorocarbon Seals, Santoprene and Hytrel Diaphragms

2600 RPM AT ¼ HORSEPOWER					
MOTOR	VOLTAGE	RATED	FULL LOAD	POWER CORD	AVAILABILITY
	12V DC	20 AMPS	26 AMPS	20' w/ Battery Clips and 30 Amp Fuse	Non-Explosion Proof
					Explosion-Proof (CE Listed)
					Explosion-Proof (UL Listed)
	24V DC	10 AMPS	15 AMPS	15' w/out Battery Clips or Fuse	Explosion-Proof (UL Listed)
110V AC	2 AMPS	2.5 AMPS	6.6' w/ Type B NEMA Grounded Connector	Non-Explosion Proof	
				Explosion-Proof (UL Listed)	

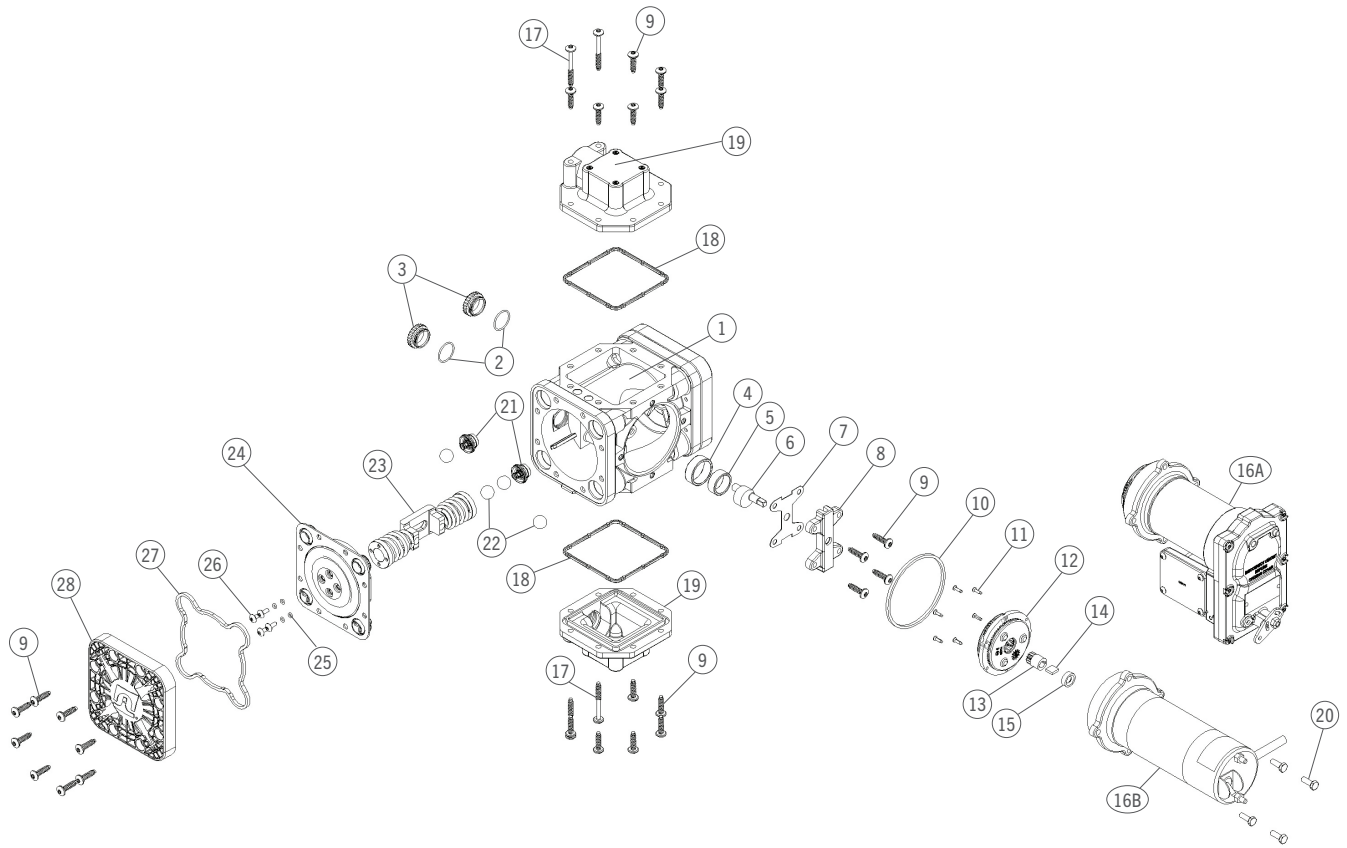
SUCTION				
	THREAD		DESCRIPTION	INLET CONFIGURATION ¹
	INLET	MOUNTING		
NPT	1"	-	Straight Flange (Plastic)	AA
	-	2"	Threaded Bung Tank Opening Adapter	
SAE	1- 5/16" - 12"	-	Flange Metal, Anodized (SAE Threaded)	BB
NPT	1"	2"	Straight Flange (Plastic)	CC
	1"	-	Straight Flange (Plastic)	DD
NPT	1"	2" (Buttress)	Threaded Bung Tank Opening Adapter	
	1"	2"	Threaded Bung Tank Opening Adapter	
BSPP	1"	-	90° w/ Mounting	EE
	1"	-	90° w/ Mounting	
DISCHARGE				
NPT	1"	-	90° w/ Fixed Mounting, 4 Directions Possible	AA
BSPP	1"	-		

MAXIMUM VALUES*	
GPM	13 GPM**
	<1 GPM [†]
DRY VAC	8 IN-HG
SUCTION LIFT	9' (at Sea Level)
OUTLET HEAD	38'
OUTLET PRESSURE	15 PSI
PARTICULATE TOLERANCE	1/16 INCH
SOUND LEVEL	77 Dba
TEMPERATURE RANGE	-10°F (-23°C) to 130°F (54°C)
DIMENSIONS	14"L x 8-1/4"H x 8-3/4"D

This pump is able to move shear sensitive fluids and run dry without damage. Flow control is easily controlled by outlet throttling without damage to the pump (i.e. maximum to zero). Handles viscosities from 1.0 cP to 3,700 cP. Does not include inlet strainer. ¹See the full Sotera Owner's Manual for additional information

*Temperature Reference at 70°F, **Water at 1.0 cP, [†]Yogurt / Glycerin at 3,000 cP

400B SERIES COMMON PARTS LIST



PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	Pump Body	1	15	Shaft Lip Seal, 400 Motor Shaft	1
2	O-Ring Nitrile, -022	2	16A, 16B	Motor Assembly	1
3	Sight Cap	2	17	Screw, ¼ - 10 x 2.25 PTS-SS	4
4	Bearing Ring	1	18	Flange Gasket - EPDM	2
5	Brushing, 1.250 OD. x 1.00 ID.	1	19	90° Flange with Inserts	2
6	Drive Shaft	1	20	Screw, ¼ - 20 x .750 LG	4
7	Thrust Plate	1	21	Outlet Check Valve	4
8	Bearing Plate	1	22	Ball	8
9	Screw, ¼ - 10 x 1.00 PTS-SS	32	23	Yoke Assembly	1
10	O-Ring, Lathe Cut Nitrile	1	24	Diaphragm Assembly	2
11	Screw, 6-32 Flat Head Trilobular	6	25	O-Ring, EPDM, -007	2
12	Gear Pack Assembly	1	26	PHM Screw, 10 - 24 x .5 LG	8
13	Drive Gear	1	27	Diaphragm Cover Gasket - EPDM	2
14	Key, Rotor	1	28	Diaphragm Covers	2
ITEM	UL LISTED / CE CERTIFIED MOTORS	QTY	ITEM	STANDARD DUTY MOTORS	QTY
16A	12V DC CE Compliant Explosion Proof	1	16B	12V DC	1
16A	12V DC UL Listed Explosion Proof	1	16B	115V AC	1
16A	24V DC UL Listed Explosion Proof	1			
16A	15V AC UL Listed Explosion Proof	1			

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MODEL	PRIMARY USAGE	FLUID COMPATIBILITY	NOTES
'FR'	LUBRICATION	Gear Oil Lube Oil Hydraulic Fluid Waste Oil Sludge/Slurry	Do not allow the transferred fluid to remain in the pump for an extended period of time. Sotera pumps must be flushed after final usage to thoroughly clean the diaphragm and check valve assemblies. The below cleaning agents are recommended to complete this process: <ol style="list-style-type: none"> #2 diesel for petroleum-based chemicals Water for water-based chemicals Do not use pressurized water to flush Sotera pumps due to the risk of damage occurring if pressure exceeds 15 PSI. Instead, submerge the suction tube or inlet adapter into clean water, then operate the pump to dispense. Dispose of the flushed water properly.
'SS'	CHEMICALS	Herbicides Insecticides Fungicides Fertilizer Crop Oil	

Always refer to the Sotera Chemical Resistance Guide (Sotera.com) for chemical comparability against the wetted parts within a 400B Series pump

400B SERIES MODEL INFORMATION

LUBRICATING FLUIDS APPLICATIONS ¹					
MODEL NUMBER	VOLTAGE	INLET CONFIGURATION ²	STEEL SUCTION INLET	ACCESSORIES	
				1" MANUAL NOZZLE	HOSE ³
HYTREL/NBR DIAPHRAGM					
FR205B	24V DC UL EXP	AA	No Accessories		
FR205BX054		BB	No Accessories		
FR210B		AA	X	X	12'
FR405BEXPX054		BB	No Accessories		
FR410B	12V DC	AA	X	X	12'
FR410BEXP	12V DC UL EXP		X	X	12'
FR450B	115V AC		X	X	12'

ACCESSORY CONFIGURATORS BY MODEL⁴

MODEL	VERSION	FEMALE CAMLOCK COUPLER	1" POLY SHORT NIPPLE	2" TO 1" POLY REDUCER BUSHING	1" BALL VALVE & NOZZLE	HOSE BARBS & CLAMPS	DIGITAL METER		FRAME
							825	850	
Pump-N-Go	A	2"	-	X	X	X	-	-	-
Chemtraveller®	A	1"	X	-	X	X	X	-	Short
	B	2"	X	X	X	X	-	X	Short
	C	2"	X	X	X	X	-	-	Short
	D	1"	X	-	-	X	X	-	Tall
	E	-	-	-	-	X	X	-	-
Mix-N-Go	A	-	-	-	X	X	X	-	-

¹Always refer to the Sotera Chemical Resistance Guide (Sotera.com). ²Refer to page 1, Suction, Inlet Configuration column for more details, ³Non-UL w/ static wire fuel hose,

⁴Refer to page 4, Version column for specific 400B Series Model Information

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400B SERIES MODEL INFORMATION *(CONT.)*

CHEMICALS: AGRICULTURE & INDUSTRIAL ¹									
		ACCESSORIES							
		SUCTION INLET				DISCHARGE			
SANTOPRENE / EDPM DIAPHRAGM									
MODEL NUMBER	VOLTAGE	INLET	POLY ²	HOSE ³	ANTI-DRIP POLY	HOSE ³	SPECIAL	VERSION ⁴	
SS411BCEXP	12V DC CE EXP	FF	No Accessories					-	
SS413BCEXP PG		EE	-	39"	X	12'	Pump-N-Go	A	
SS415B	12V DC	AA	No Accessories						
SS415BX670									
SS415BEXPX670	12V DC UL EXP	EE							
SS415BX731	12V DC W/ BRACKET	AA							
SS415BX731PG									
SS417B	12V DC	DD	X	-	X	12'	Includes 1" Ball Valve, Hose Barbs, & Clamps	-	
SS419BX665		CC	X	-	X		Monsanto Coupler, Support Bracket for Pump	-	
SS420B		AA	X	-	X		Nozzle Hanger on Pump	-	
SS425B		EE	-	39"	X		IBC Mount w/ Fittings	-	
SS435B			-	9'	X		Chemtraveller	A	
SS435BCEXP			12V DC CE EXP	-	9'		X	Chemtraveller	B
SS435BX675			12V DC	-	9'		X	Chemtraveller (All EPDM)	A
SS435BX700		-		9'	X		Chemtraveller	C	
SS435BX713		-		9'	X		Mix-N-Go w/ Recirculation & Check Valve	-	
SS435BEXPX703		12V DC UL EXP	-	9'	X		Mix-N-Go w/ Recirculation & Check Valve (All EPDM)	-	
SS445B	12V DC	9" GEMCAP	X	-	X	Mix-N-Go w/ Recirculation & Check Valve	-		
SS445BX700			X	-	X	Mix-N-Go w/ Recirculation & Check Valve	-		
SS445BX727			X	-	X	Nozzle Hanger on Pump, 1" Ball Valve Nozzle, Barbs & Clamps	-		
SS460B	115V AC	AA	X	-	X	12'	Nozzle Hanger on Pump, 1" Ball Valve Nozzle, Barbs & Clamps	-	
SS460BX674		EE	X	-	X				
SS460BX731	115V AC W/ BRACKET	CC	X	-	X	12'	Pump-N-Go	-	
SS460BX731PG			X	-	X				
SS465BEXP	115V AC UL EXP	EE	-	9'	X	12'	Chemtraveller	D	
SS465BX713	115V AC		-	9'	X	12'	Chemtraveller	E	
SS470B			-	39"	X	12'	IBC Mount w/ Fittings	-	

¹Always refer to the Sotera Chemical Resistance Guide (Sotera.com), ²Telescoping Poly Suction Pipe (23" to 40"), ³EPDM Hose, ⁴Refer to page 3, Accessory Configurator table